

IN THE CLAIMS:

1. (Currently Amended) A particle beam image detector employing gas amplification attained by pixel-type electrodes, ~~characterized by~~ comprising:

(a) anode strips formed on one ~~the back~~ surface of a double-sided substrate,

(b) columnar anode electrodes which are joined to ~~planted in~~ the anode strips and extend through ~~such that their upper ends penetrate~~ the double-sided substrate so as to be exposed at to a surface thereof, and

(c) strip-shaped cathode electrodes each having an aperture receiving one ~~such that each of the corresponding columnar anode, each aperture having a radius electrodes falls therein, the radius of the aperture is similar to the thickness of the said substrate, and~~ each aperture having a ~~the~~ diameter ~~of the aperture is~~ smaller than the width of one of ~~the~~ said anode strips ~~strip~~ so that the direction of the line of electric force is always perpendicular to said one ~~upward at an insulator surface, eliminating any risk of generating an the undesired electrostatic field caused by accumulation of positive ions generated through gas amplification.~~

2. (Currently Amended) The particle beam image detector ~~employing gas amplification attained by pixel-type electrodes~~ as recited in claim 1, wherein each of the anode strips has a width of about 200 to 400 μm .

3. (Currently Amended) The particle beam image detector ~~employing gas amplification attained by pixel-type electrodes~~ as recited in claim 1, wherein the anode strips are provided at intervals of

about 400 μm , the strip-shaped cathode electrodes each have apertures at intervals of a predetermined distance, the diameter of the aperture being about 200 to 300 μm , and each of the columnar anode electrodes has a diameter of about 40 to 60 μm and a height of about 50 to 150 μm .

4. (New) The particle beam image detector as recited in claim 1 further comprising a planar drift electrode facing, parallel to and spaced from said substrate.

5. (New) The particle beam image detector as recited in claim 1 wherein voltage is applied only to the anode strips and to the drift electrode.

6. (New) The particle beam image detector as recited in claim 5 wherein the cathode electrodes are oriented perpendicular to the anode strips.

7. (New) The particle beam image detector as recited in claim 6 wherein the cathode electrodes are formed on a second surface of said substrate, opposite the one surface.

8. (New) The particle beam detector as recited in claim 7 wherein the columnar anode electrodes extend from the anode strips a distance approximating the thickness of said substrate.

9. (New) The particle beam image detector as recited in claim 1 wherein the cathode electrodes are oriented perpendicular to the anode strips.

10. (New) The particle beam detector as recited in claim 1 wherein the columnar anode electrodes extend from the anode strips a distance approximating the thickness of said substrate.

11. (New) The particle beam image detector as recited in claim 10 wherein the cathode electrodes are formed on a second surface of said substrate, opposite the one surface.

12. (New) The particle beam image detector as recited in claim 1 wherein the cathode electrodes are formed on a second surface of said substrate, opposite the one surface.